AMENDMENTS TO THE CLAIMS

Claims 1-11 (CANCELLED)

12. (PREVIOUSLY PRESENTED) An apparatus for shaping a selected end region of a hollow cylindrical glass tube used in the manufacture of optic fibers comprising:

a support device for holding the tube at a second region other than the selected end region for rotating the tube in a controlled manner;

an internal mold for shaping an inner surface of the selected end region of the tube, said internal mold being selectively operable and collapsible between an open and extended configuration and a closed and collapsed configuration;

an insertion device for inserting said internal mold within said selected end region of the tube and for setting the internal mold in its extended configuration;

a heat source supplying heat to the selected end region of the tube to render the tube malleable;

an external mold for compressing the exterior surface of the selected end region of the tube when rendered malleable, and for concurrently causing the

shape of an inner surface of the tube to conform to the exterior surface of the internal mold; wherein said external mold includes a pair of side pieces for imparting an oblate, cone-like shape to inner and outer diameters of the tube along the selected end region while leaving an opening between the side pieces for enabling a withdrawal of the external mold when set to the collapsed configuration;

a mechanically actuated holding device for supporting the external mold; and

a temperature sensing device for sensing the temperature of the selected end region of the tube.

13. (PREVIOUSLY PRESENTED) The apparatus as claimed in claim 12, wherein the temperature sensing device is a pyrometer producing an actuating signal coupled to the mechanically actuated holding device when the temperature of the selected end portion is such that the end portion is in a malleable state.

14. (PREVIOUSLY PRESENTED) The apparatus as claimed in claim 13, wherein the heat source is a torch and wherein said actuating signal produces

a signal for removing the torch when the exterior mold is applied to the selected end portion of the tube.

15. (PREVIOUSLY PRESENTED) The apparatus as claimed in claim 14, wherein said temperature sensing device controls the intensity of the heat source being applied to the selected end portion of the tube.

Claims 16-18 (CANCELLED)

19. (PREVIOUSLY PRESENTED) A method for shaping a selected end of a hollow cylindrical tube comprising the steps of:

positioning the tube within a support device and rotating the tube;

inserting an internal mold within the selected end region of the tube to support the tube end when the tube is being shaped and for controlling the shape of an inner surface of the tube end, wherein the internal mold is operatively collapsible between an extended and open configuration and a collapsed and closed configuration;

heating the selected end of the tube with a heat source until the selected end becomes malleable;

controlling the heating step with an optical sensor sensing a physical condition of the tube or with an output from a pyrometer;

compressing the exterior surface of the selected end region of the tube for concurrently shaping the exterior and inner surfaces of the selected end region of the tube into a predetermined form, wherein the exterior surface of the selected end region is compressed with at least one of an exterior mold and a paddle.

20. (PREVIOUSLY PRESENTED) The method as claimed in claim 19, wherein the step of inserting the internal mold includes a step of setting the internal mold to its open configuration before and during a period in which heat is applied to the selected end of the tube.

21. (PREVIOUSLY PRESENTED) The method as claimed in claim 20, wherein the step of compressing the exterior surface of the selected end region of the tube for concurrently shaping the exterior and inner surfaces of the selected end region of the tube includes a step of applying the external mold to the selected end of the tube when the selected end becomes malleable.

22. (PREVIOUSLY PRESENTED) A method for shaping an opening and an end region at a selected end of a cylindrical tube comprising the steps of:

holding a portion of the tube other than the selected end, and rotating the tube;

inserting an internal mold into the selected end of the tube for supporting the end of the tube and for shaping the inner surface of the tube;

applying a heat source to the selected end of the tube until the selected end becomes malleable;

sensing the temperature of the selected end of the tube; and

applying an exterior mold to the outer periphery of the tube along the selected end in response to sensing a certain temperature for tapering the selected end of the tube and gradually reducing the inner diameter of the tube from a second value to a first value.

23. (PREVIOUSLY PRESENTED) The method as claimed in claim 22, wherein said internal mold is a mold having a selectively alterable shape.

24. (NEW) The apparatus as claimed in claim 12, further comprising an optical sensing device for sensing a physical condition of the tube.

25. (NEW) The apparatus as claimed in claim 12, further comprising an activation device for setting the internal mold to its extended configuration, and for setting the internal mold to its collapsed configuration for withdrawing the mold from the tube through an opening in the selected end region, wherein said activation device includes an air cylinder, a spring-loaded mechanism, or a motor.

26. (NEW) The apparatus as claimed in claim 12, wherein said mechanically actuated holding device selectively applies the exterior mold to an outer periphery of the selected end region of the tube when the tube is rendered malleable, and said internal mold cooperatively supports an inner wall of the tube and controls the shape of an inner diameter of the tube

27. (NEW) The apparatus as claimed in claim 12, wherein said support device is a lathe.

28. (NEW) The apparatus as claimed in claim 26, wherein the tube is a first tube and wherein the variable configuration mold and the exterior mold shape the opening of the first tube to enable a second tube to be inserted

within the first tube and permit the alignment of the first and second tubes along a common center line.